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J. S. DU BOIS.

Sleeping Car.

No. 109,119. Patented Nov. 8, 1870.

Fig. 1.

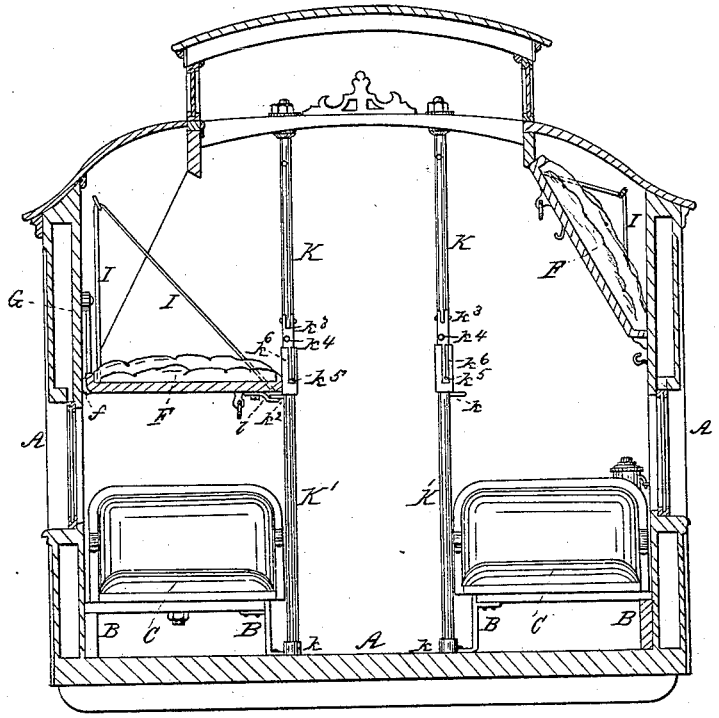

Fig. 3.

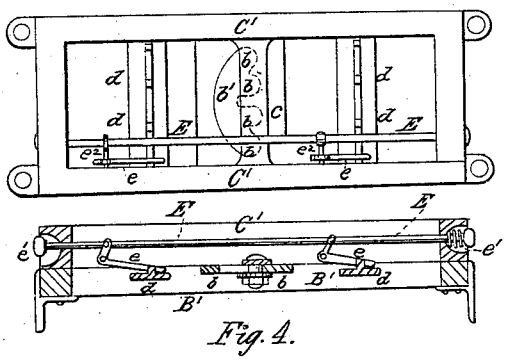

Fig. 4.

Witnesses:

William H. Forthel

Robert Burns.

Inventor:

J. S. Du Bois

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Fig. 2.

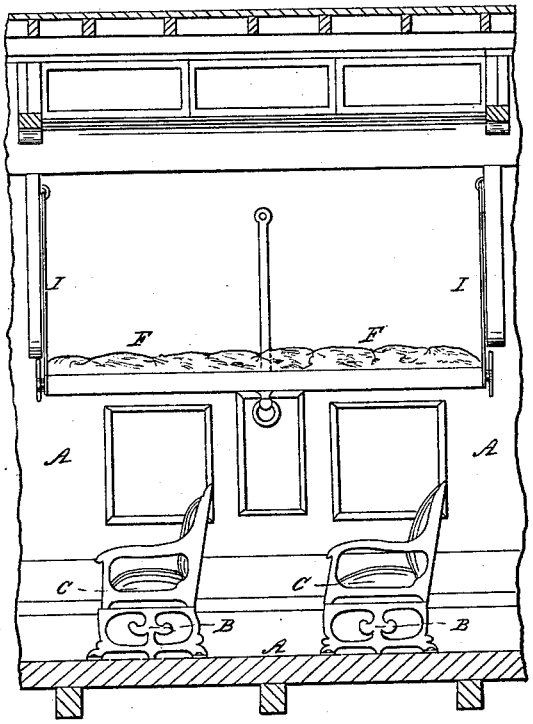


Fig. 6.

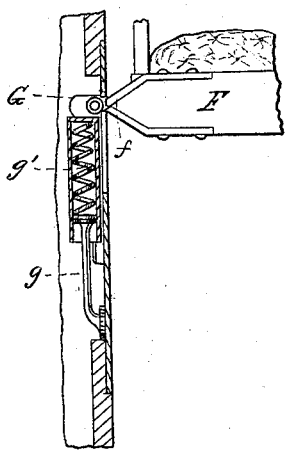
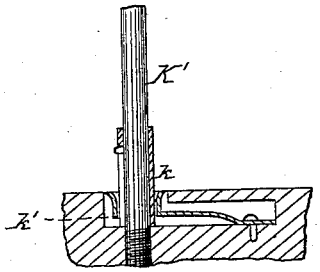


Fig. 5.



Witnesses:

William W. Kethel

Robert Burns

Inventor:

J. S. Du Bois

UNITED STATES PATENT OFFICE.

JOSEPH S. DU BOIS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIMSELF AND THOMAS DORWIN, OF LEAVENWORTH, KANSAS.

IMPROVEMENT IN RAILWAY SLEEPING-CARS.

Specification forming part of Letters Patent No. **109,119**, dated November 8, 1870.

To all whom it may concern:

Be it known that I, JOSEPH S. DU BOIS, of St. Louis, in the county of St. Louis and State of Missouri, have made certain new and useful Improvements in Railroad Sleeping-Cars; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing.

This invention relates in its nature, first, to such an arrangement of the railroad-car seat that, while the same in day use shall face in the direction of the car's motion, as usual in common passenger-cars, it shall be capable of being turned around, so as to face the seat preceding or following, and thus the two seats shall be in position to receive the bedding in the usual manner in sleeping-cars.

Said invention relates, secondly, to the manner of securing the upper berths, there being in connection therewith a series of posts capable of giving support to the berth-frames, and which in day-time are changed to a horizontal position overhead and parallel to the car's length.

To enable those skilled in the art to make and use my said improved sleeping-car, I will now more fully describe the same, referring to the accompanying drawing.

Figure 1 is a transverse section of a car with my improvement. Fig. 2 is a longitudinal section of a portion of the same. Fig. 3 is a plan of the seat-frame. Fig. 4 is a section of the seat-frame. Fig. 5 is a detail section, showing the rod or post attachment to the car-floor; and Fig. 6 is a section of the end spring which supports the upper berth.

The car-body A is formed in the usual manner. Supported upon the floor is the base-frame B for each seat C, the seat being supported and capable of revolving upon said base. In ordinary day use the seats are in such a position that the passengers face in the direction of motion. At night, the cushions being lifted off, the alternate seats are turned around, thus placing the seat-frames so as to receive the bedding between them in a maner now usual on some sleeping-cars. The arrangement of the seat-frame for turning is more fully indicated in Figs. 3 and 4.

The seat-frame C′ has a pivot-pin, *c*, placed, as indicated, at a point a little forward of the center. Said pin engages in one of the several notches *b* of the top frame, B′, of the base B, said notches *b* being in one side of a circular slot, *b′*. The notches *b* are to allow adjustment of seats at distances apart as required for day or night use.

It is plain that the seat C, being close to the car side, could not turn without the clearance which the slot *b′* will allow.

To retain the seat in its proper position, I have arranged on the cross-bars of the frame B′ notches *d*, into which the pawls *e* engage, the latter being formed like bell-crank levers. They are pivoted in the side of the frame C′, and are operated by a hand-rod, E, passing longitudinally through C′, which rod is maintained in position by a coiled spring, e^1, the rod being moved longitudinally. The links e^2 move the pawls *e* out of the notches *d*, thus allowing the seat to be moved as required. In each section (the space between two seats) there is thus formed the lower berth. Above the same, at proper distance, is supported the upper berth. This, in day use, is drawn up diagonally across the upper car-corner. A suitable handle enables the porter to draw down the berth-frame F.

The rear side, *f*, of the berth-frame is pivoted to a sliding head, G, which moves up and down a limited distance on the rod *g*, there being a spring, *g′*, to assist in raising the berth when not in use. By this means the rear of the frame is elastically supported, and it is permitted to drop down, when in use, low enough for proper berth-room.

The front of the frame is supported, when not in use, by the elastic bands I, secured at the front and rear of the frame, and passing over a pulley or hook in the top of the car. As the frame is drawn forward and downward the bands are distended, and have a tendency to close the frame.

To support the berths when in use, I arrange at the seat corners the jointed posts K K′, which are held in position by the ferrules *k*, which slide in proper sockets k^1 in the floor of the car. At a proper height each post has a pin, k^2, upon which the upper berth-frame rests, and to avoid a return movement a latch-plate, *l*, is pivoted to the bottom of the frame, which takes under the pin k^2.

Other securing devices may be applied; but as they must plainly be equivalent in action a description is not needed.

The rods K K′ are jointed at proper heights, say at k^3, above the floor, the joint allowing the lower portion, K′, to be raised to a horizontal position. The rod next to it being similarly arranged, the lower sections of the rods are turned to a horizontal position and brought end to end. The ferrule k^6 is turned and moved forward until the pin k^4 is in the slot k^5, when the ferrule will reach over the adjacent end of the other rod sufficiently to gain a firm support. Thus a line of bars, K′, is made, which may be ornamental to the car. The detail of the attachment of the rods to the car-floor is plainly shown in Fig. 5.

I propose to place screw-sockets in the car-floor between the seats for the insertion of rods, which bear light plates at the top, to serve as tables.

Other conveniences are added in the usual manner, thus forming, with the improved devices herewith presented, a car complete and economical in construction.

Having thus fully described my said invention, what I claim is—

1. The seat-frame C′, with its pivot *c*, in combination with the notches *b* and slat *b′* in the lower frame, substantially as and for the purpose set forth.

2. The frame C′, latch-rod E, spring e^1, levers *e*, and notches *d*, when combined with frame B′, substantially as set forth.

3. The hinged posts K K′, in combination with the ferrules *k* and k^6, substantially as and for the purpose set forth.

4. The jointed posts K K′, pin k^2, and latch *l*, in combination with the frame F, all substantially as described.

5. The combination and arrangement of the frame F, suspending-bands I I, rear elastic support G *g g′*, and the jointed posts K K′, latch *l*, and pin k^2, all constructed and operating substantially as herein described.

In testimony of said invention I have hereunto set my hand in presence of witnesses.

JOSEPH S. DU BOIS.

Witnesses:
WILLIAM W. HERTHEL,
ROBERT BURNS.